JDBC Example 1 (Sql queries)

```
import java.util.*;
import java.sql.*;
class Dbdemo
{
           static Connection link;
              static Statement stm;
             static ResultSet rs;
   Dbdemo() throws SQLException
   {
       try
{

Class.forName("com.mysql.jdbc.Driver");
link = DriverManager.getConnection("jdbc:mysql://172.16.2.3/student","student",
"student");
                     }
              catch(ClassNotFoundException cnfEx)
              {
                     System.out.println("* Unable to load driver! *");
                     System.exit(1);
              }
              catch(SQLException sqlEx)
              {
              System.out.println("* Cannot connect to database! *");
              System.exit(1);
              }
 stm = link.createStatement ( );
}

  void displayinfo() throws SQLException
  {


    String s = "SELECT * FROM Account85";
     rs = stm.executeQuery (s);
while(rs.next())

{
         System.out.println(rs.getInt(1) + "\t" + rs.getString(2)+"\t" +
rs.getString(3)+"\t" + rs.getString(4));
}


  }
void insertinfo() throws SQLException
  {
       int r1=0;

            Scanner s=new Scanner(System.in);
            System.out.println("Enter accNum");
```

```
                int accno=s.nextInt();
                 System.out.println("Enter surname");
                 String sur=s.next();

                 System.out.println("Enter firstname");
                String fname=s.next();
                 System.out.println("Enter balance");
                double bal=s.nextFloat();

  try
{
              String s1 = "insert into Account85
values("+accno+",'"+sur+"','"+fname+"',"+bal+")";
       r1 = stm.executeUpdate (s1);
  }
               catch(Exception e)
               {
                  System.out.println(e);
              }
            System.out.println(r1 +"rows affected");


  }
void deleteinfo() throws SQLException
  {

            Scanner s1=new Scanner(System.in);
            System.out.println("Enter the account no.");
            int acc = s1.nextInt();


            String s2 = "DELETE FROM Account85 WHERE accNum="+acc ;
            stm.executeUpdate (s2);
            System.out.println("Database deleted successfully!!!!");


  }
void updateinfo() throws SQLException
  {

            Scanner s1=new Scanner(System.in);
            System.out.println("Enter the account no.");
            int acc = s1.nextInt();
            System.out.println("enter the new name");
            String name=s1.next();
            String s3 = "update Account85 set firstNames='" +name+"' where
accNum="+acc;
            stm.executeUpdate (s3);
            System.out.println("Database updated successfully!!!!");


 }
```

```
void closecon() throws SQLException
{
     rs.close();
     stm.close();
     link.close();
  }

}



public class JDBCdemo {

       public static void main(String[] args) throws SQLException {
              // TODO Auto-generated method stub

              boolean f=true;

              Dbdemo d1 = new Dbdemo();
              d1.displayinfo();

              while(f)
              {
                        System.out.println("1:insert   2:delete   3:display  4:update
5:exit");
                     System.out.println("enter your option");
                     Scanner s=new Scanner(System.in);
                     int op=s.nextInt();
                     switch(op)
                     {
                            case 1:d1.insertinfo();

                                   break;

                            case 2:d1.deleteinfo();
                                   ;
                                   break;
                            case 3:d1.displayinfo();
                                   break;
                            case 4:d1.updateinfo();

                                   break;
                            case 5:f=false;
                     }

              }
               d1.closecon();


       }

}
```

Example 2: Java modified methods

```
import java.util.*;
import java.sql.*;
class Sample
{
       static Connection con;
    static Statement stm;
    static ResultSet rs;

    Sample() throws SQLException
 {
     try
     {

           Class.forName("com.mysql.jdbc.Driver");  // step 1
 con = DriverManager.getConnection("jdbc:mysql://172.16.2.3/student","student",
"student"); // step 2

     }

catch(ClassNotFoundException cnfEx)
{
       System.out.println("* Unable to load driver! *");
       System.exit(1);
}
catch(SQLException sqlEx)
{
System.out.println("* Cannot connect to database! *");
System.exit(1);
}

stm=con.createStatement(ResultSet.TYPE_SCROLL_SENSITIVE,
ResultSet.CONCUR_UPDATABLE); // step 3


rs=stm.executeQuery("select *from stu");

}

    public void insert() throws SQLException
    {
      Scanner inp=new Scanner(System.in);

      System.out.println("Enter the usn");

      int usn;

    usn=inp.nextInt();
```

```
System.out.println("Enter the fname");

String fname=inp.next();

rs.moveToInsertRow();

rs.updateInt("rollno",usn);
rs.updateString("name",fname);

rs.insertRow();

}

void delete(int r)throws SQLException
{

   rs.absolute(r);

   rs.deleteRow();
}

void update(int r) throws SQLException
{

   rs.absolute(r);

   Scanner s1= new Scanner(System.in);

     String fname= s1.nextLine();

     rs.updateString("name", fname);

     rs.updateRow();
}


void search (int r)throws SQLException

{
   String s = "SELECT * FROM stu";
     rs = stm.executeQuery (s);
     int pos=0;
     while(rs.next())

     {
          if(r==rs.getInt(1))
          {
                pos=1;

                break;
          }

     }
```

```
        if(pos==1)
        {
             System.out.println("search is suessful");
        }

        else
        {
             System.out.println("Record not found");
        }

    }

}
public class J2M {

       public static void main(String[] args) throws SQLException {

             // TODO Auto-generated method stub

             Sample obj=new Sample();
             boolean flag=true;
             while(true)
              {
             System.out.println("1.Insert 2.Delete 3.Update 4.Search");
             Scanner s=new Scanner(System.in);
             int choice=s.nextInt();
             switch(choice)
              {
             case 1:obj.insert();
             break;

             case 2:
                       System.out.println("enter the row to be deleted");
                        int r=s.nextInt();
                    obj.delete(r);
          break;

             case 3: System.out.println("enter the row to be updated");
                      int r1=s.nextInt();
                      obj.update(r1);
                     break;

             case 4:
                    System.out.println("enter the usn to be searched");
                    int r2=s.nextInt();

                           obj.search(r2);
                           break;

             default:
             System.exit(0);
             break;

              }
         }
```

```
        }
}
```

Example 3: Program to illustrate Metadata Concept.

```
import java.sql.*;
public class Md
{

public static void main(String[] args)
{

try
{
Class.forName("com.mysql.jdbc.Driver");
Connection
con=DriverManager.getConnection("jdbc:mysql://172.16.2.3/student","student","student");

Statement stm= con.createStatement();

ResultSet rs=stm.executeQuery("select *from account003");
ResultSetMetaData rsmd=rs.getMetaData();

System.out.println("Total columns: "+rsmd.getColumnCount());

 for(int i=1; i<=rsmd.getColumnCount(); i++)
 {

System.out.println("Column Name of 1st column: "+rsmd.getColumnName(i));
System.out.println("Column Type Name of 1st column: "+rsmd.getColumnTypeName(i));
 }

 DatabaseMetaData dbmd=con.getMetaData();

 System.out.println("Driver Name: "+dbmd.getDriverName());

 System.out.println("Database Product Name: "+dbmd.getDatabaseProductName());

con.close();
}
```

```
catch(Exception e)
{
System.out.println(e);
}
}

}
```